

Exhibit B to the Complaint.

**U.S. Patent No. US 9,448,603 v. Motorola**

Exhibit B to the Complaint.

## 1. Claim Chart

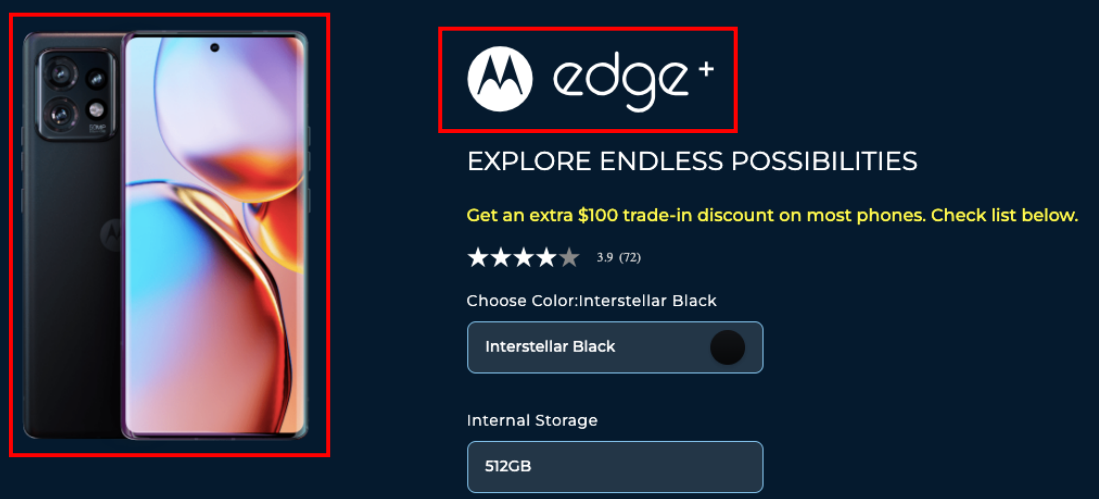
Claim	Analysis
<p>[1.P] A method for transferring power to a receptor mobile device from a donor mobile device having a battery, comprising;</p>	<p>Motorola (“Company”) performs and/or induces others to perform a method for transferring power to a receptor mobile device from a donor mobile device having a battery.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, Company provides smartphones such as Motorola Edge + (used herein as an exemplary product), Motorola Edge 40, Motorola Edge 40 pro, Motorola Edge, Motorola Razr+, Motorola Razr 40 Ultra, and Motorola Edge 30 Ultra that implement Qi, a standard for wireless power transfer, and comprises Wireless Power Sharing functionality. In Wireless Power Share, the power is transferred wirelessly from a battery (“battery”) of Motorola Edge+ (“donor mobile device”) to the battery of another wireless charging compatible device (“receptor mobile device”) including, but not limited to Motorola Edge, Motorola Edge+, Motorola Edge 40, Motorola Edge 40 pro, Motorola Razr+, Motorola Razr 40 Ultra, and Motorola Edge 30 Ultra.</p>  <p>Source: <a href="https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893">https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893</a></p>

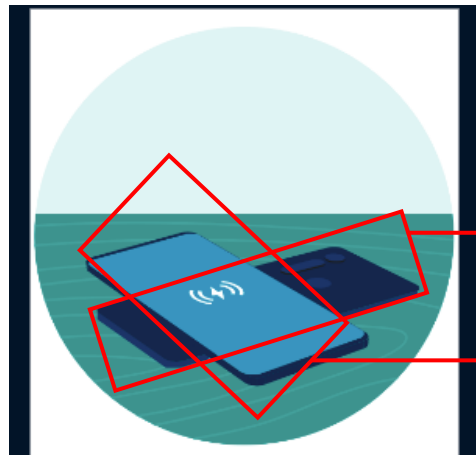
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battery	<b>Battery Size</b> 5100mAh	<b>Charging</b> 68W TurboPower™ charging 15W wireless charging 5W wireless power sharing	<b>Battery Life</b> Over a day of battery life (up to 40 hours) <sup>7</sup>
	<b>Charger Type</b> TurboPower™		

Source: <https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

Fast, convenient 15W Qi charging for the new Edge+ so you can power up without plugging in. Enjoy a simple charging experience up to 3X faster than standard 5W Qi chargers with this elegant charging system.

Source: <https://motorolachargers.com/product/turbopower-15w-wireless-charging-pad/>



Motorola Edge+ (“donor mobile device”)

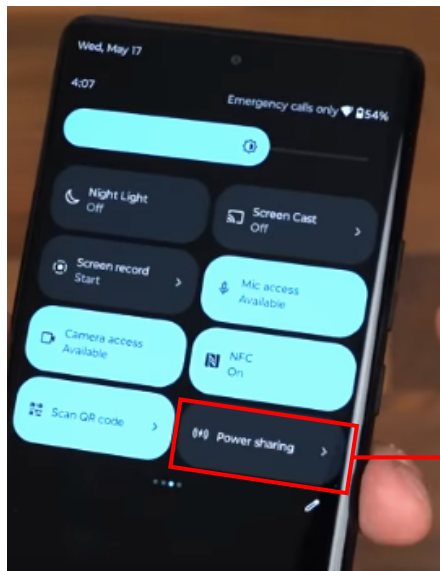
Motorola Edge (“receptor mobile device”)

Source: [https://en-us.support.motorola.com/app/answers/detail/a\\_id/150219/~wireless-charging---motorola-edge-%2B](https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~wireless-charging---motorola-edge-%2B) (annotated)

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	Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.								
[1.1] configuring a donor wireless power transfer mechanism on the donor mobile device using a wireless transmit application;	<p>Company performs and/or induces others to perform a method of configuring a donor wireless power transfer mechanism on the donor mobile device using a wireless transmit application.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, the Motorola Edge + smartphone includes the Power sharing functionality ("wireless transmit application") that is configured to be activated via the Motorola Edge + smartphone settings user interface.</p> <div><p><b>Wireless power sharing</b> Power sharing lets your phone charge another wireless charging compatible device.</p><p><b>To charge another device with your phone:</b></p><p>1. Go to <b>Settings &gt; Battery &gt; Power sharing</b>, and turn it on.</p></div> <p>Source: <a href="https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/_/wireless-charging---motorola-edge-%2B">https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/_/wireless-charging---motorola-edge-%2B</a></p> <div><table><tr><td>battery</td><td><b>Battery Size</b> 5100mAh</td><td><b>Charging</b> 68W TurboPower™ charging 15W wireless charging 5W wireless power sharing</td><td><b>Battery Life</b> Over a day of battery life (up to 40 hours)<sup>7</sup></td></tr><tr><td></td><td><b>Charger Type</b> TurboPower™</td><td></td><td></td></tr></table></div> <p>Source: <a href="https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893">https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893</a></p>	battery	<b>Battery Size</b> 5100mAh	<b>Charging</b> 68W TurboPower™ charging 15W wireless charging 5W wireless power sharing	<b>Battery Life</b> Over a day of battery life (up to 40 hours) <sup>7</sup>		<b>Charger Type</b> TurboPower™		
battery	<b>Battery Size</b> 5100mAh	<b>Charging</b> 68W TurboPower™ charging 15W wireless charging 5W wireless power sharing	<b>Battery Life</b> Over a day of battery life (up to 40 hours) <sup>7</sup>						
	<b>Charger Type</b> TurboPower™								

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wireless transmit application

Source: <https://www.youtube.com/watch?v=mPJK7wgDjXQ> at 5:52 (annotated)

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.2]  
configuring a  
receptor  
wireless  
power  
transfer  
mechanism  
on the  
receptor  
mobile  
device using  
a wireless

Company performs and/or induces others to perform a method of configuring a receptor wireless power transfer mechanism on the receptor mobile device using a wireless receive application.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, another wireless charging compatible device such as the Motorola Edge smartphone gets charged when it is placed back-to-back on the Motorola Edge+ smartphone. Therefore, it would be apparent that the Motorola Edge smartphone comprises a wireless receive application in its firmware that is activated in order for the charging to commence.

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<p>receive application;</p>	<div data-bbox="411 269 1381 1084"> <p>2. Place your phone face down on a flat surface</p>  <p>3. Place a wireless charging compatible device in the area outlined by the edge lights</p>  <p>4. For best results when charging another device, position the device as shown below.</p>  <p>Motorola Edge placed back-to-back on Motorola Edge + for charging.</p> </div> <p>Source: <a href="https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-/wireless-charging---motorola-edge-%2B">https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-/wireless-charging---motorola-edge-%2B</a></p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[1.3] transferring power from donor mobile device to the receptor</p>	<p>Company performs and/or induces others to perform a method of transferring power from donor mobile device to the receptor mobile device using the donor wireless power transfer mechanism and the receptor wireless power transfer mechanism.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p>

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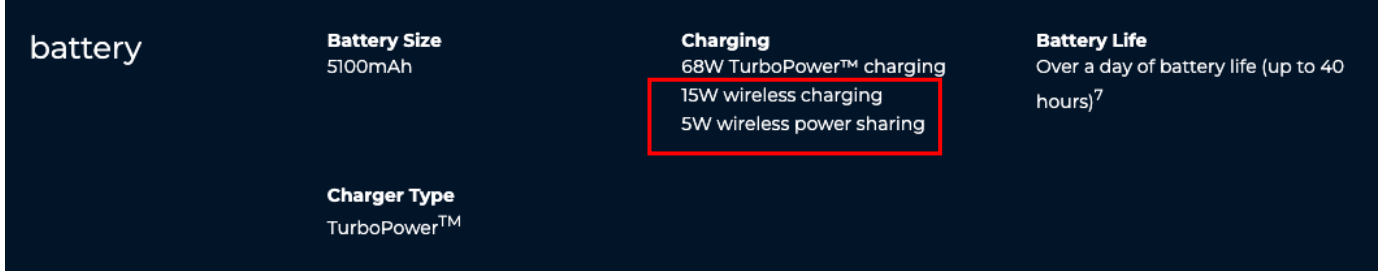
<p>mobile device using the donor wireless power transfer mechanism and the receptor wireless power transfer mechanism; and</p>	<p>For example, the power is transferred from the Motorola Edge + smartphone to the Motorola Edge smartphone through Qi wireless power transfer using magnetic induction ("the donor wireless power transfer mechanism and the receptor wireless power transfer mechanism").</p>  <p>Source: <a href="https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893">https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893</a></p> <p>Fast, convenient 15W Qi charging for the new Edge+ so you can power up without plugging in. Enjoy a simple charging experience up to 3X faster than standard 5W Qi chargers with this elegant charging system.</p> <p>Source: <a href="https://motorolachargers.com/product/turbopower-15w-wireless-charging-pad/">https://motorolachargers.com/product/turbopower-15w-wireless-charging-pad/</a></p> <p>The Qi wireless power transfer system uses magnetic induction to transfer power from a Power Transmitter Product (charger) to a Power Receiver Product (smartphone).</p> <p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction</a></p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
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<p>[1.4] receiving and converting received power into electric current using the receptor wireless power transfer mechanism;</p>	<p>Company performs and/or induces others to perform a method of receiving and converting received power into electric current using the receptor wireless power transfer mechanism.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, Company uses magnetic induction to transfer power from the power transmitter in the Motorola Edge + smartphone to the power receiver in the Motorola Edge smartphone. Further, when charging begins, the magnetic field is picked up by the coil inside Motorola Edge smartphone and transformed by a power converter back into a direct electrical current that can be used to charge the Motorola Edge battery.</p> <h3>3 How Qi wireless power transfer works</h3> <div data-bbox="417 711 1633 896" style="border: 2px solid red; padding: 10px;"> <h4>3.1 Basic concepts</h4> <p>The Qi wireless power transfer system uses magnetic induction to transfer power from a Power Transmitter Product (charger) to a Power Receiver Product (smartphone).</p> </div> <p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction</a>, Page 8</p>
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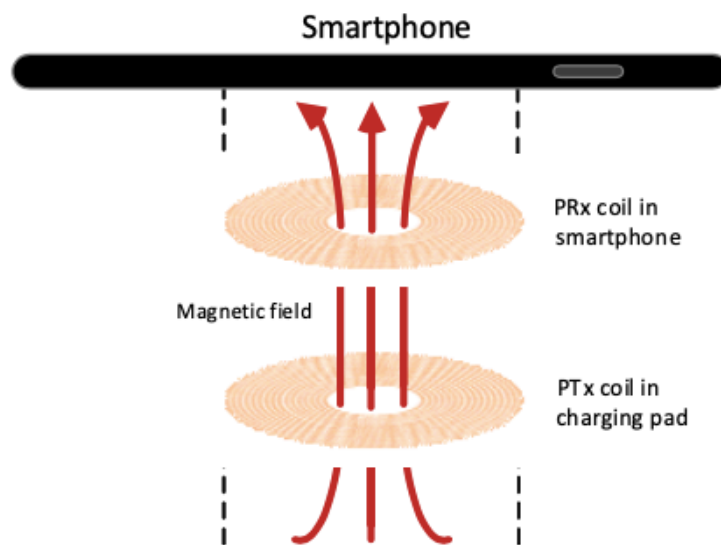


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When charging begins, the Power Transmitter runs an alternating electrical current through its coil(s), which generates an alternating magnetic field in accordance with Faraday's law. This magnetic field is in turn picked up by the coil inside the Power Receiver and transformed by a power converter back into a direct electrical current that can be used to charge the battery.

A critical feature of the magnetic field is that it can transfer through any non-metallic, non-ferrous materials, such as plastics, glass, water, wood, and air. In other words, wires and connectors are not needed between the Power Transmitter Product and Power Receiver Product.

**Figure 6. Qi wireless power transfer using magnetic induction**



Source: <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction>, Page 9

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

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<p>[1.5] wherein the donor wireless power transfer mechanism includes a primary coil and donor circuit elements and the receptor wireless power transfer mechanism includes a secondary coil, receptor circuit elements and a capacitor such that the donor circuit elements provide electric current to the primary coil producing a magnetic field that</p>	<p>Company performs and/or induces others to perform a method of transferring power, wherein the donor wireless power transfer mechanism includes a primary coil and donor circuit elements and the receptor wireless power transfer mechanism includes a secondary coil, receptor circuit elements and a capacitor such that the donor circuit elements provide electric current to the primary coil producing a magnetic field that generates an electric current in the secondary coil and the receptor circuit elements thereby transferring power from donor mobile device to the receptor mobile device, the capacitor storing electric charge that increases battery life when the capacitor is discharged.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, when charging begins, the power transmitter in Motorola Edge+ smartphone runs an alternating electrical current through its coil (“primary coil”), which generates an alternating magnetic field. This magnetic field is in turn picked up by the coil (“secondary coil”) inside the power receiver in the Motorola Edge smartphone and transformed by a power converter back into a direct electrical current that can be used to charge the Motorola Edge smartphone.</p> <p>Further, the power receiver circuitry in Motorola Edge smartphone comprises a secondary coil and a capacitor such that the battery gets charged. Further, the power receiver in Motorola Edge smartphone sends a signal to the power transmitter in the Motorola Edge+ phone when wireless power is not required. It would be apparent to a person having ordinary skill in the art that the capacitor in the Motorola Edge smartphone’s circuitry is used for storing an electric charge which further increases the battery life.</p>
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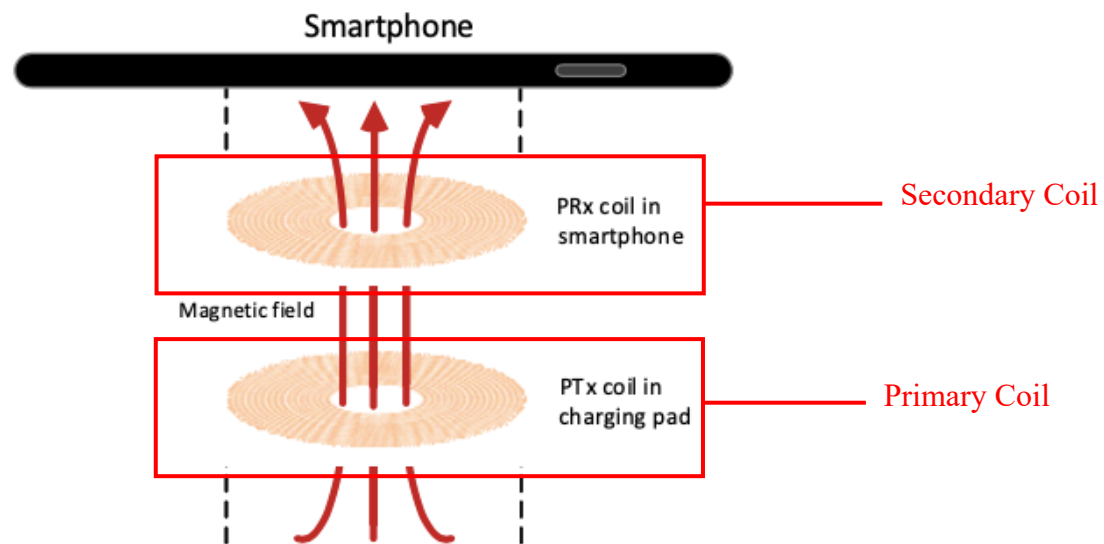
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generates an electric current in the secondary coil and the receptor circuit elements thereby transferring power from donor mobile device to the receptor mobile device, the capacitor storing electric charge that increases battery life when the capacitor is discharged.

When charging begins, the Power Transmitter runs an alternating electrical current through its coil(s), which generates an alternating magnetic field in accordance with Faraday's law. This magnetic field is in turn picked up by the coil inside the Power Receiver and transformed by a power converter back into a direct electrical current that can be used to charge the battery.

A critical feature of the magnetic field is that it can transfer through any non-metallic, non-ferrous materials, such as plastics, glass, water, wood, and air. In other words, wires and connectors are not needed between the Power Transmitter Product and Power Receiver Product.

**Figure 6. Qi wireless power transfer using magnetic induction**

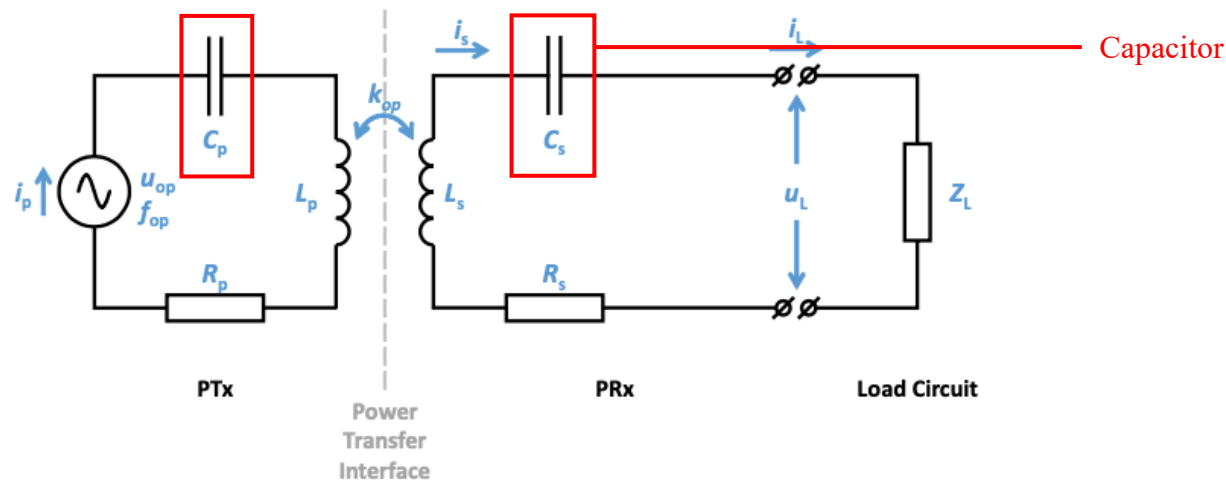


Source: <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction> , Page 9

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Figure 11 illustrates a simplified model of the system comprising a Power Transmitter on the left and a Power Receiver on the right. For clarity, the load circuit is drawn separately from the Power Receiver. The Power Transmitter consists of a power source ( $u_{op}, f_{op}$ ), a capacitance  $C_p$ , an inductance  $L_p$ , and a resistance  $R_p$ . The power source supplies a sinusoidal voltage  $u_{op}$  at a frequency  $f_{op}$ . The Power Receiver consists of a capacitance  $C_s$ , an inductance  $L_s$ , and a resistance  $R_s$ . A load having an impedance  $Z_L$  is connected to the output terminals of the Power Receiver. The symbols  $u_L$ ,  $i_L$ ,  $i_p$ , and  $k_{op}$  represent the load voltage, load current, Primary Coil current, and coupling factor.

Figure 11. Simplified system model



Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery) , Page 33

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	<p>It is recommended that the Power Transmitter Product's power consumption in stand-by mode of operation meets the Energy Star EPS Requirements for "Energy consumption for No-Load" and the European Commission, Code of Conduct of Energy Efficiency of External Power Supplies for "No-load power consumption." It is also recommended that a Power Receiver is designed in a manner that when wireless power is not required, the Power Receiver will send an End Power Transfer Packet to put the Power Transmitter Product in stand-by mode.</p> <p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery</a>, Page 45</p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[4] The method of claim 1, further comprising configuring a receptor power threshold using a wireless receive application.</p>	<p>Company performs and induces others to perform the method of claim 1, further configuring a receptor power threshold using a wireless receive application.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, the Motorola Edge smartphone includes an output disconnect switch, which gets activated when the power receiver reaches a certain maximum threshold. Furthermore, the Motorola Edge smartphone is designed in a manner that when wireless power is not required, the Motorola Edge smartphone will send an End Power Transfer Packet to put the power transmitter functionality in the Motorola Edge + phone in standby mode. Therefore, it would be apparent to a person having ordinary skill in the art that the Motorola Edge smartphone gets charged until the battery of Motorola Edge smartphone reaches a specific power threshold.</p> <ul style="list-style-type: none"> <li>An output disconnect switch, which prevents current from flowing to the output when the Power Receiver does not provide power at its output. In addition, the output disconnect switch prevents current back flow into the Power Receiver when the Power Receiver does not provide power at its output. Moreover, the output disconnect switch minimizes the power that the Power Receiver draws from the Power Transmitter when a Power Signal is first applied to the Secondary Coil.</li> </ul>

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Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery), Page 13

The Power Receiver shall have the means to disconnect its output from the subsystems connected thereto. If the Power Receiver has disconnected its output, it shall ensure that it still draws a sufficient amount of power from the Power Transmitter, such that Power Receiver to Power Transmitter communications remain possible (see *Qi Specification, Communications Physical Layer*).

The Power Receiver shall keep its output disconnected until it reaches the *power transfer* phase for the first time after a Digital Ping (see the *Qi Specification, Communications Protocol*). Subsequently, the Power Receiver may operate the output disconnect switch any time while the Power Transmitter applies a Power Signal.

**NOTE:** The Power Receiver may experience a voltage peak when operating the output disconnect switch (and changing between maximum and near-zero power dissipation).

Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery), Page 17

It is recommended that the Power Transmitter Product's power consumption in stand-by mode of operation meets the Energy Star EPS Requirements for "Energy consumption for No-Load" and the European Commission, Code of Conduct of Energy Efficiency of External Power Supplies for "No-load power consumption." It is also recommended that a Power Receiver is designed in a manner that when wireless power is not required, the Power Receiver will send an End Power Transfer Packet to put the Power Transmitter Product in stand-by mode.

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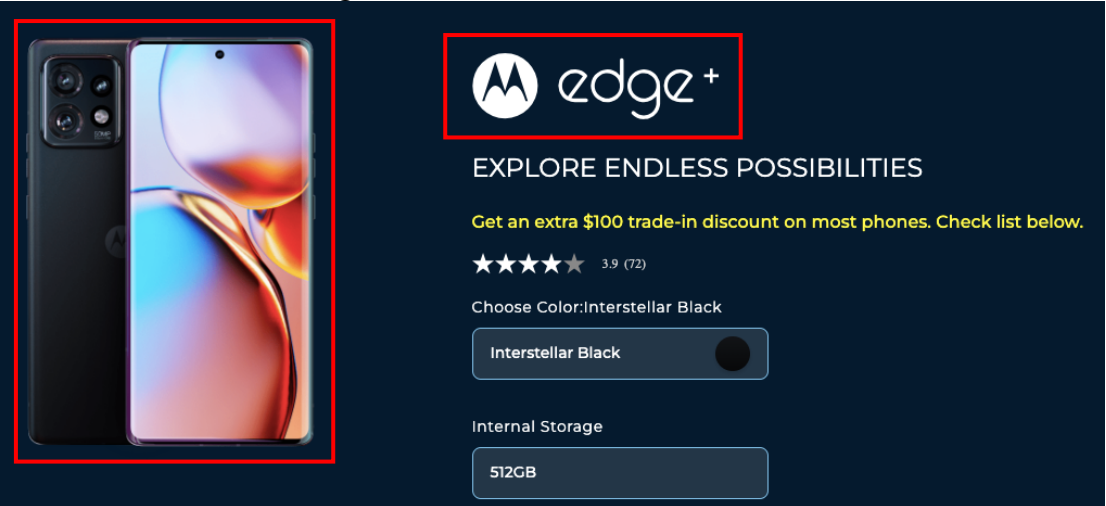
	<p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery</a>, Page 45</p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[8-P] A method for transferring power to a receptor mobile device from a donor mobile device having a battery, comprising;</p>	<p>Motorola ("Company") performs and induces others to perform a method for transferring power to a receptor mobile device having a first battery from a donor mobile device having a second battery.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, Company provides smartphones such as Motorola Edge + (used herein as an exemplary product), Motorola Edge 40, Motorola Edge 40 pro, Motorola Edge, Motorola Razr+, Motorola Razr 40 Ultra, and Motorola Edge 30 Ultra that implement Qi, a standard for wireless power transfer, and comprises Wireless Power Sharing functionality. In Wireless Power Share, the power is transferred wirelessly from a battery ("battery") of Motorola Edge+ ("donor mobile device") to the battery of another wireless charging compatible device ("receptor mobile device") including, but not limited to Motorola Edge, Motorola Edge+, Motorola Edge 40, Motorola Edge 40 pro, Motorola Razr+, Motorola Razr 40 Ultra, and Motorola Edge 30 Ultra.</p>  <p>Source: <a href="https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893">https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893</a></p>



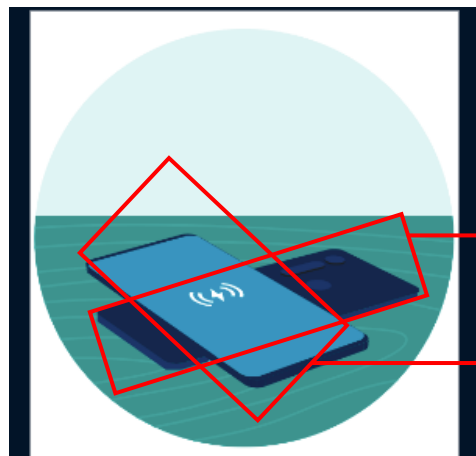
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	<b>Charger Type</b> TurboPower™		

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Fast, convenient 15W Qi charging for the new Edge+ so you can power up without plugging in. Enjoy a simple charging experience up to 3X faster than standard 5W Qi chargers with this elegant charging system.

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Motorola Edge+ (“donor mobile device”)

Motorola Edge (“receptor mobile device”)

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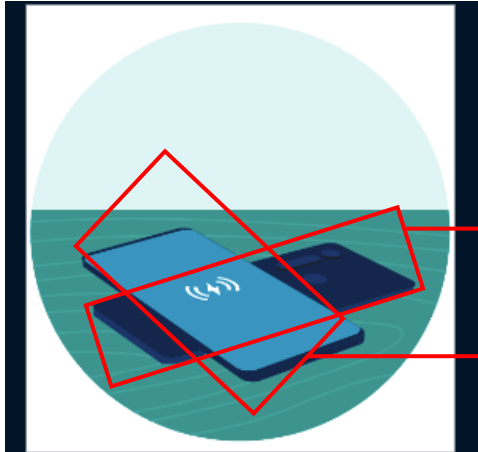
	<p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[8.1] configuring a wireless power transfer mechanism on the receptor mobile device using a wireless receive application;</p>	<p>Company performs and induces others to perform the method of configuring a wireless power transfer mechanism on the receptor mobile device using a wireless receive application.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, another wireless charging compatible device such as Motorola Edge smartphone gets charged when it is placed back-to-back on the Motorola Edge+ smartphone. Therefore, it would be apparent that the Motorola Edge smartphone comprises a wireless receive application in its firmware that is activated in order for the charging to commence.</p>  <p>Motorola Edge+ ("donor mobile device")</p> <p>Motorola Edge ("receptor mobile device")</p> <p>Source: <a href="https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-wireless-charging---motorola-edge-%2B">https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-wireless-charging---motorola-edge-%2B</a> (annotated)</p>

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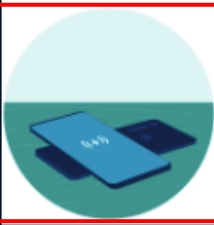
	<p>2. Place your phone face down on a flat surface</p>  <p>3. Place a wireless charging compatible device in the area outlined by the edge lights</p>  <p>4. For best results when charging another device, position the device as shown below.</p>  <p>Motorola Edge placed back-to-back on Motorola Edge + for charging.</p> <p>Source: <a href="https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-/wireless-charging---motorola-edge-%2B">https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-/wireless-charging---motorola-edge-%2B</a></p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[8.2] determining a receptor power threshold using a</p>	<p>Company performs and induces others to perform the method of determining a receptor power threshold using a wireless receive application.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p>

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<p>wireless receive application;</p>	<p>For example, the Motorola Edge smartphone includes an output disconnect switch, which gets activated when the power receiver reaches a certain maximum threshold. Furthermore, the Motorola Edge smartphone is designed in a manner that when wireless power is not required, the Motorola Edge smartphone will send an End Power Transfer Packet to put the power transmitter functionality in the Motorola Edge + smartphone in standby mode. Therefore, it would be apparent to a person having ordinary skill in the art that the Motorola Edge smartphone gets charged until the battery of the Motorola Edge smartphone reaches a specific power threshold.</p> <p>Fast, convenient 15W Qi charging for the new Edge+ so you can power up without plugging in. Enjoy a simple charging experience up to 3X faster than standard 5W Qi chargers with this elegant charging system.</p> <p>Source: <a href="https://motorolachargers.com/product/turbopower-15w-wireless-charging-pad/">https://motorolachargers.com/product/turbopower-15w-wireless-charging-pad/</a></p> <p><b>Wireless power sharing</b> Power sharing lets your phone charge another wireless charging compatible device. <b>To charge another device with your phone:</b></p> <ol style="list-style-type: none"> <li>1. Go to <b>Settings &gt; Battery &gt; Power sharing</b>, and turn it on.</li> </ol> <p>Source: <a href="https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/_/wireless-charging---motorola-edge-%2B">https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/_/wireless-charging---motorola-edge-%2B</a></p> <p>The Qi wireless power transfer system uses magnetic induction to transfer power from a Power Transmitter Product (charger) to a Power Receiver Product (smartphone).</p> <p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction</a> , Page 8</p>
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- An output disconnect switch, which prevents current from flowing to the output when the Power Receiver does not provide power at its output. In addition, the output disconnect switch prevents current back flow into the Power Receiver when the Power Receiver does not provide power at its output. Moreover, the output disconnect switch minimizes the power that the Power Receiver draws from the Power Transmitter when a Power Signal is first applied to the Secondary Coil.

Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery), Page 13

The Power Receiver shall have the means to disconnect its output from the subsystems connected thereto. If the Power Receiver has disconnected its output, it shall ensure that it still draws a sufficient amount of power from the Power Transmitter, such that Power Receiver to Power Transmitter communications remain possible (see *Qi Specification, Communications Physical Layer*).

The Power Receiver shall keep its output disconnected until it reaches the *power transfer* phase for the first time after a Digital Ping (see the *Qi Specification, Communications Protocol*). Subsequently, the Power Receiver may operate the output disconnect switch any time while the Power Transmitter applies a Power Signal.

**NOTE:** The Power Receiver may experience a voltage peak when operating the output disconnect switch (and changing between maximum and near-zero power dissipation).

Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery), Page 45

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	<p>It is recommended that the Power Transmitter Product's power consumption in stand-by mode of operation meets the Energy Star EPS Requirements for "Energy consumption for No-Load" and the European Commission, Code of Conduct of Energy Efficiency of External Power Supplies for "No-load power consumption." It is also recommended that a Power Receiver is designed in a manner that when wireless power is not required, the Power Receiver will send an End Power Transfer Packet to put the Power Transmitter Product in stand-by mode.</p> <p>Source: <a href="https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery">https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery</a>, Page 45</p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.</p>
<p>[8.3] receiving power from the donor mobile device and converting received power into electric current using the wireless power transfer mechanism;</p>	<p>Company performs and induces others to perform the method of receiving power from the donor mobile device and converting received power into electric current using the wireless power transfer mechanism.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, Company uses magnetic induction to transfer power from the power transmitter in the Motorola Edge+ smartphone to the power receiver in Motorola Edge smartphone. Further, when charging begins, the magnetic field is picked up by the coil inside Motorola Edge smartphone and transformed by a power converter back into a direct electrical current that can be used to charge the Motorola Edge smartphone battery.</p> <h3>3 How Qi wireless power transfer works</h3> <div data-bbox="415 1252 1635 1433" style="border: 1px solid red; padding: 10px;"> <h4>3.1 Basic concepts</h4> <p>The Qi wireless power transfer system uses magnetic induction to transfer power from a Power Transmitter Product (charger) to a Power Receiver Product (smartphone).</p> </div>

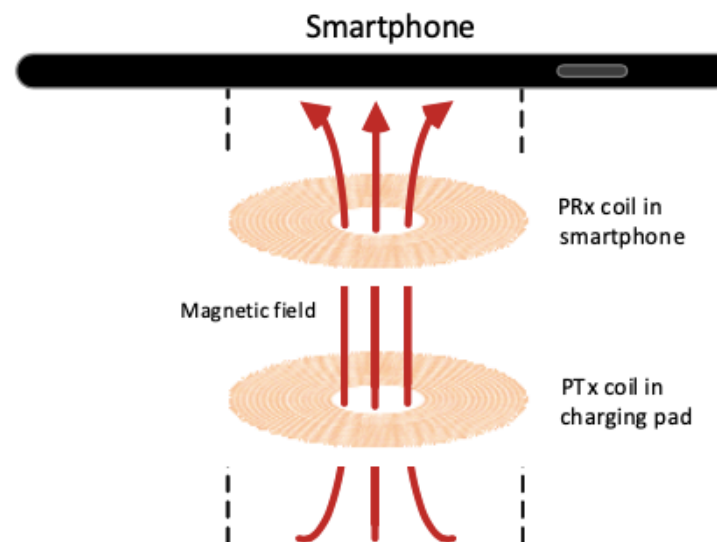
Exhibit B to the Complaint.

Source: <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction>, Page 8

When charging begins, the Power Transmitter runs an alternating electrical current through its coil(s), which generates an alternating magnetic field in accordance with Faraday's law. This magnetic field is in turn picked up by the coil inside the Power Receiver and transformed by a power converter back into a direct electrical current that can be used to charge the battery.

A critical feature of the magnetic field is that it can transfer through any non-metallic, non-ferrous materials, such as plastics, glass, water, wood, and air. In other words, wires and connectors are not needed between the Power Transmitter Product and Power Receiver Product.

**Figure 6. Qi wireless power transfer using magnetic induction**



Source: <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction>, Page 9

Exhibit B to the Complaint.

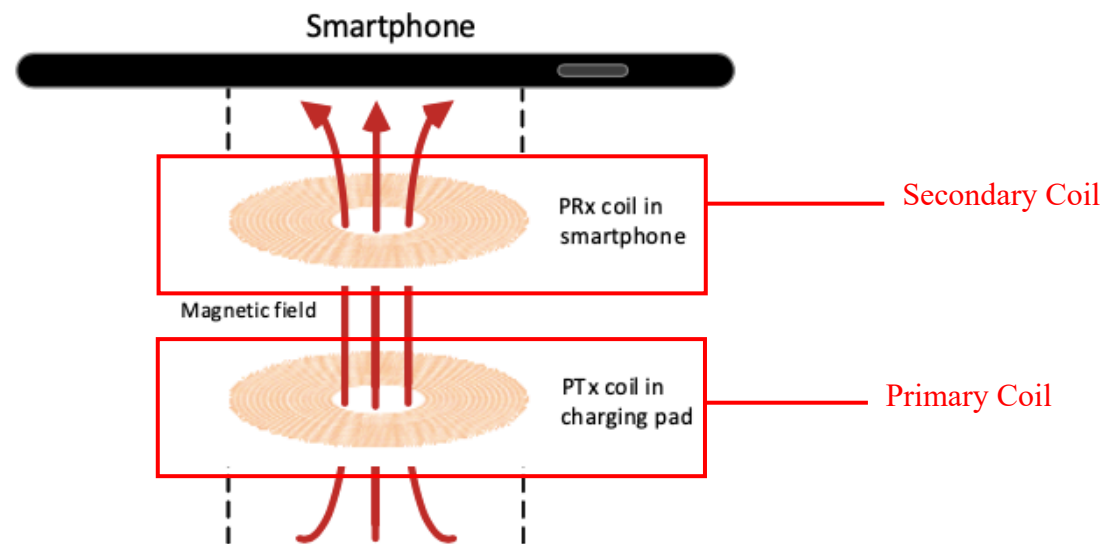
	Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.
[8.4] wherein the wireless power transfer mechanism includes a power adapter having coil, circuit elements to transfer power and a capacitor to store electric charge that increases battery life when the capacitor is discharged.	<p>Company performs and induces others to perform the method wherein the wireless power transfer mechanism includes a power adapter having coil, circuit elements to transfer power and a capacitor to store electric charge that increases battery life when the capacitor is discharged.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, when charging begins, the power transmitter in Motorola Edge+ smartphone runs an alternating electrical current through its coil ("primary coil"), which generates an alternating magnetic field. This magnetic field is in turn picked up by the coil ("secondary coil") inside the power receiver in the Motorola Edge smartphone and transformed by a power converter back into a direct electrical current that can be used to charge the Motorola Edge smartphone battery.</p> <p>Further, the power receiver circuitry in Motorola Edge smartphone comprises a secondary coil and a capacitor such that the battery gets charged. Further, the power receiver in Motorola Edge smartphone sends a signal to the power transmitter in the Motorola Edge + smartphone when wireless power is not required. It would be apparent to a person having ordinary skill in the art that the capacitor in the Motorola Edge smartphone's circuitry is used for storing an electric charge which further increases the battery life.</p>

Exhibit B to the Complaint.

When charging begins, the Power Transmitter runs an alternating electrical current through its coil(s), which generates an alternating magnetic field in accordance with Faraday's law. This magnetic field is in turn picked up by the coil inside the Power Receiver and transformed by a power converter back into a direct electrical current that can be used to charge the battery.

A critical feature of the magnetic field is that it can transfer through any non-metallic, non-ferrous materials, such as plastics, glass, water, wood, and air. In other words, wires and connectors are not needed between the Power Transmitter Product and Power Receiver Product.

**Figure 6. Qi wireless power transfer using magnetic induction**



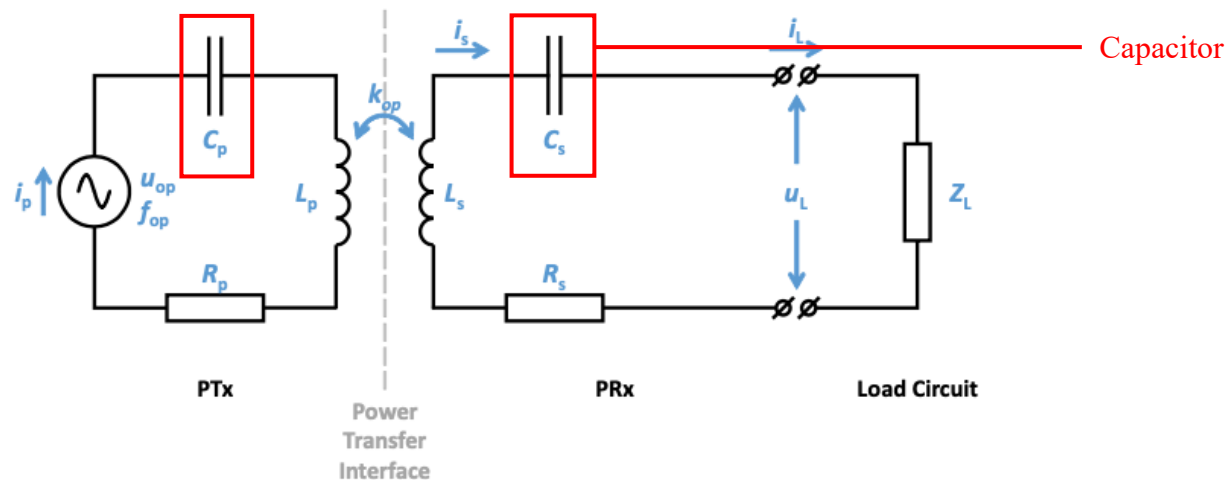
Source: <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-introduction> , Page 9



Exhibit B to the Complaint.

Figure 11 illustrates a simplified model of the system comprising a Power Transmitter on the left and a Power Receiver on the right. For clarity, the load circuit is drawn separately from the Power Receiver. The Power Transmitter consists of a power source ( $u_{op}, f_{op}$ ), a capacitance  $C_p$ , an inductance  $L_p$ , and a resistance  $R_p$ . The power source supplies a sinusoidal voltage  $u_{op}$  at a frequency  $f_{op}$ . The Power Receiver consists of a capacitance  $C_s$ , an inductance  $L_s$ , and a resistance  $R_s$ . A load having an impedance  $Z_L$  is connected to the output terminals of the Power Receiver. The symbols  $u_L$ ,  $i_L$ ,  $i_p$ , and  $k_{op}$  represent the load voltage, load current, Primary Coil current, and coupling factor.

Figure 11. Simplified system model



Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery) , Page 33

Exhibit B to the Complaint.

It is recommended that the Power Transmitter Product's power consumption in stand-by mode of operation meets the Energy Star EPS Requirements for "Energy consumption for No-Load" and the European Commission, Code of Conduct of Energy Efficiency of External Power Supplies for "No-load power consumption." It is also recommended that a Power Receiver is designed in a manner that when wireless power is not required, the Power Receiver will send an End Power Transfer Packet to put the Power Transmitter Product in stand-by mode.

Source: [https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power\\_Delivery](https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/V-1.3-Power_Delivery), Page 45

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

Exhibit B to the Complaint.

## 2. List of References

1. <https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>, last accessed on 14 March, 2023.
2. [https://en-us.support.motorola.com/app/answers/detail/a\\_id/150219/~/-wireless-charging---motorola-edge-%2B](https://en-us.support.motorola.com/app/answers/detail/a_id/150219/~/-wireless-charging---motorola-edge-%2B), last accessed on 14 March, 2023.
3. <https://www.youtube.com/watch?v=mPJK7wgDjXQ>, last accessed on 14 March, 2023.
4. <https://www.wirelesspowerconsortium.com/knowledge-base/specifications/download-the-qi-specifications/> , last accessed on 14 March, 2023